



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

11/11

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/665,606	09/19/2003	Zafer Sahinoglu		6389
22199	7590	02/19/2008		
MITSUBISHI ELECTRIC RESEARCH LABORATORIES, INC. 201 BROADWAY 8TH FLOOR CAMBRIDGE, MA 02139			EXAMINER OVEISSI, DAVID M	
			ART UNIT 2616	PAPER NUMBER
			MAIL DATE 02/19/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/665,606	SAHINOGLU ET AL.
	Examiner David Oveissi	Art Unit 2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 10/22/2007.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-10 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-10 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 19 September 2003 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. _____.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>5/26/2004, 09/19/2003</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application
	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1- 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Zhang et al.** (US 7,096,034 B2) in view of **Chaddha** (US 6,233,017 B1).

For claims 1 and 10 **Zhang** teaches a method/system for encoding multimedia to be transmitted on a channel, comprising:

measuring a condition of the channel (see *Fig. 5 “Probing Network Condition”, column 4 line 40, and lines 52-53*);

providing a set of error resilient source encoding procedures (see *column 1 lines 42-49*);

providing a set of channel encoding procedures(see *column 1 lines 42-49*);

providing a set of transmitter power levels (see *column 8 lines 63-65*);

providing an objective function and a constraint based on energy and distortion (see *abstract*); and

selecting jointly a particular error resilient source encoding procedure, a particular channel encoding procedure, and a particular power level based on the condition of the channel and the rate and distortion characteristics, while minimizing an objective function and satisfying a constraint (see *column 1 lines 32-49*).

Zhang does not teach measuring rate and distortion characteristics of the multimedia limitation. Furthermore, **Chaddha**, from the same field of endeavor teaches this limitation (see *abstract*). Thus, it would have been obvious to the person of ordinary skill in the art at the time invention to combine the multimedia characteristics measurement of **Chaddha** in the JSCC scheme of **Zhang**. The motivation for this combination is to provide a flexible JSCC for multimedia.

For claim 2 **Zhang** teaches a method, in which the objective function minimizes energy while the constraint is a distortion (see *Fig.5 “530”*).

For claim 3 **Zhang** teaches a method, in which the objective function minimizes distortion while the constraint is energy (see *column 2 lines 19-21*).

For claim 4 **Zhang** teaches a method, further comprising: applying the particular error resilient source encoding procedure to the multimedia to produce a bit stream; applying the particular channel encoding procedure to the bitstream to produce an output signal; and applying the particular power level to the output signal for transmission (see *column 1 line 44, column 6 lines 52-61, and column 8 lines 63-66*).

For claim 5 **Zhang** does not teach a method, in which the bitstream includes a plurality of layers, and the selecting is performed independently for each layer.

Furthermore, **Chaddha** teaches this limitation (*see abstract*). Thus, it would have been obvious to the person of ordinary skill in the art at the time invention to combine the multimedia characteristics measurement of **Chaddha** in the JSCC scheme of **Zhang**.

The motivation for this combination is to provide a flexible JSCC for multimedia.

For claim 6 **Zhang** does not teach a method , in which the condition includes bandwidth. Furthermore, **Chaddha** teaches this limitation (*see column 2 lines 5-6*). Thus, it would have been obvious to the person of ordinary skill in the art at the time invention to combine the multimedia characteristics measurement of **Chaddha** in the JSCC scheme of **Zhang**. The motivation for this combination is to provide a flexible JSCC for multimedia.

For claims 7 and 8 **Zhang** does not teach a method, in which the multimedia include JPEG 2000 images. Furthermore, **Chaddha** teaches this limitation (*see column 25 lines 62, and 64*). Thus, it would have been obvious to the person of ordinary skill in the art at the time invention to combine the multimedia characteristics measurement of **Chaddha** in the JSCC scheme of **Zhang**. The motivation for this combination is to provide a flexible JSCC for multimedia.

For claim 9 **Zhang** does not teach a method, in which the objective function is minimized and the constraint is satisfied by analyzing an energy-distortion curve. Furthermore, **Chaddha** teaches this limitation (*see column 25 line 51*). Thus, it would have been obvious to the person of ordinary skill in the art at the time invention to combine the multimedia characteristics measurement of **Chaddha** in the JSCC scheme of **Zhang**. The motivation for this combination is to provide a flexible JSCC for multimedia.

Conclusion

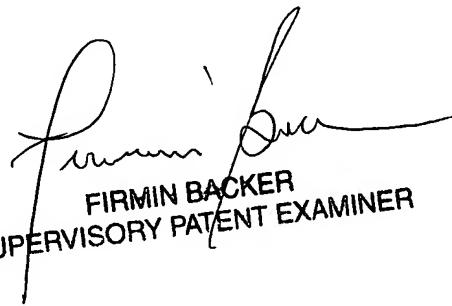
2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure **Verto et al. (US 7,324,592 B2)**, **Chiang et al. (6,160,846)**, and **Chou et al. (US 7,222,285 B2)**.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Oveissi whose telephone number is (571) 270-3127. The examiner can normally be reached on Monday to Friday 8:00 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Backer Firmin can be reached on (571) 272-6703. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

D.O



FIRMIN BACKER
SUPERVISORY PATENT EXAMINER